

## PROJECT DESCRIPTION

## I GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL WITH STREET LIGHTING AND PEDESTRIAN SIGNAL HEADS AT MD 174 (QUARTERFIELD ROAD) AND PARKE WEST DRIVE/INDUSTRIAL DRIVE IN ANNE ARUNDEL COUNTY. MD 174 IS ASSUMED TO TRAVEL IN AN EAST-WEST DIRECTION.

## II INTERSECTION OPERATION

## MD 174 AND PARKE WEST DRIVE/INDUSTRIAL DRIVE

1. THE INTERSECTION IS TO OPERATE IN A NEMA SIX-PHASE, FULLY ACTUATED MODE, WITH THE MD 174 APPROACHES RUNNING CONCURRENTLY. AN EXCLUSIVE/PERMISSIVE LEFT TURN PHASE SHALL BE PROVIDED FOR THE EASTBOUND AND WESTBOUND APPROACHES OF MD 174. A PEDESTRIAN PHASE WITH PUSH BUTTON ACTUATION SHALL BE PROVIDED TO CROSS THE WEST LEG OF MD 174. A PEDESTRIAN PHASE SHALL BE PROVIDED TO CROSS PARKE WEST DRIVE. THE PARKE WEST DRIVE/INDUSTRIAL DRIVE APPROACHES SHALL OPERATE CONCURRENTLY.

THIS SIGNAL SHALL BE INCLUDED IN A SIGNAL SYSTEM. INTERCONNECT CABLE SHALL BE INSTALLED UNDERGROUND FROM OLD STAGE ROAD TO PARKE WEST DRIVE.

2. A FULL TRAFFIC ACTIVATED, EIGHT-PHASE LOCAL CONTROLLER WITH FOUR (4), FOUR CHANNEL, RACK MOUNTED LOOP DETECTOR AMPLIFIERS, ASSOCIATED HARNESS AND MASTER CONTROLLER HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS SITE.

## CONTACT PERSONS FOR DISTRICT 5 ARE AS FOLLOWS:

MR. LARRY ELLIOTT  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
410-841-1003

MR. MARK COBLENTZ  
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION  
410-841-1004

MR. CHARLES GEORGE  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
410-841-1002

MR. JOHN MAYES  
ASSISTANT DISTRICT ENGINEER - UTILITIES  
410-841-1005

## CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY:

MR. RICHARD DAFF SR.  
CHIEF, TRAFFIC OPERATIONS DIVISION  
410-787-7630

MR. ROBERT SNYDER  
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS DIVISION  
410-787-7630

MR. ED RODENHIZER  
TEAM LEADER - SIGNAL OPERATIONS  
410-787-7650

MR. EUGENE BAILEY  
TEAM LEADER - SIGN OPERATIONS  
410-787-7676

MR. DAVE SCHWARTZ  
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)  
410-787-7668

## EQUIPMENT LIST

## A. EQUIPMENT TO BE SUPPLIED BY THE STATE HIGHWAY ADMINISTRATION

CAT. CODE NO.	QUANTITY	DESCRIPTION
971017	1 EA	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED, SOLID STATE DIGITAL LOCAL CONTROLLER WITH FOUR (4) 4-CHANNEL, RACK MOUNT LOOP DETECTOR AMPLIFIERS, ASSOCIATED HARNESSSES AND MASTER CONTROLLER HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET. OVERHEAD MOUNTED SHEET ALUMINUM SIGNS TO CONSIST OF:
	1 EA	D3-2 "Quarterfield Rd." DUAL-FACE SIGN. (VARIABLE X 16") MAST ARM MOUNTED.
	1 EA	D3-2 "Parke West Dr./Industrial Dr." SIGN WITH ARROWS. (VARIABLE X 32") MAST ARM MOUNTED. BACK TO BACK.
	1 EA	D3-2 "Industrial Dr./Parke West Dr." SIGN WITH ARROWS. (VARIABLE X 32") MAST ARM MOUNTED. BACK TO BACK.
	1 EA	R10-12 "LEFT TURN YIELD ON GREEN" SIGN (36" X 42") MAST ARM MOUNTED.
	2 EA	"ASSOCIATED SHIELD ASSEMBLY" SIGN (48" X 75") POLE MOUNTED.
	2 EA	"ASSOCIATED SHIELD ASSEMBLY" SIGN (36" X 51") POLE MOUNTED.
973023	142 SF	R3-5L "LEFT TURN ONLY" SYMBOL SIGN (30"X36") MAST ARM MOUNTED.

## EQUIPMENT LIST (CON'T)

## B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

CAT. CODE NO.	QUANTITY	DESCRIPTION
203030	2 CY	TEST PIT EXCAVATION
585624	140 LF	FURNISH AND INSTALL 24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS.
800000	1 EA	FURNISH AND INSTALL 15' "T" STEEL POLE WITH TWIN 50'-60" MAST ARMS.
860278	2 EA	FURNISH AND INSTALL 12 INCH PEDESTRIAN SIGNAL HEAD SECTION
801004	6 CY	FURNISH AND INSTALL CONCRETE FOUNDATION.
837001	3 EA	FURNISH AND INSTALL GROUND ROD, 3/4" DIAMETER X 10' LENGTH.
871202	1 EA	INSTALL BASE-MOUNTED CABINET AND CONTROLLER.
813015	142 SF	INSTALL OVERHEAD MOUNTED SHEET ALUMINUM SIGN.
862102	900 LF	FURNISH AND INSTALL SAW CUT.
805011	65 LF	FURNISH AND INSTALL 1" GALVANIZED STEEL ELECTRICAL CONDUIT (DETECTOR WIRE SLEEVE).
805150	30 LF	FURNISH AND INSTALL 3" POLYVINYL CHLORIDE ELECTRICAL CONDUIT (SCHEDULE 80) (SLOTTED).
805135	200 LF	FURNISH AND INSTALL 3" POLYVINYL CHLORIDE ELECTRICAL CONDUIT (SCHEDULE 80) (TRENCHED).
805140	20 LF	FURNISH AND INSTALL 4" POLYVINYL CHLORIDE ELECTRICAL CONDUIT (SCHEDULE 80) (TRENCHED).
805118	240 LF	FURNISH AND INSTALL 4" POLYVINYL CHLORIDE ELECTRICAL CONDUIT (SCHEDULE 80) (BORED).
807400	1 EA	FURNISH AND INSTALL ELECTRICAL UTILITY SERVICE EQUIPMENT (120/240V, 1 PHASE 3 WIRE SYSTEM).
811001	4 EA	FURNISH AND INSTALL HANDHOLE (FRAME AND COVER).
802501	340 LF	FURNISH AND INSTALL STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.).
862101	3600 LF	FURNISH AND INSTALL LOOP WIRE (NO. 14 A.W.G.) ENCASED IN 1/4" FLEXIBLE TUBING.
861104	1700 LF	FURNISH AND INSTALL 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) (ALUMINUM SHIELDED).
861105	380 LF	FURNISH AND INSTALL 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
861106	300 LF	FURNISH AND INSTALL 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
861107	200 LF	FURNISH AND INSTALL 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.).
861108	1175 LF	FURNISH AND INSTALL 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.).
861116	280 LF	FURNISH AND INSTALL 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.) TYPE THHN TRAY CABLE.
861117	60 LF	FURNISH AND INSTALL 3 WIRE ELECTRICAL CABLE (NO. 4 A.W.G.).
860272	16 EA	FURNISH AND INSTALL 12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION.
860270	3 EA	FURNISH AND INSTALL 8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION.
800000	LS	REMOVE AND DISPOSAL OF EXISTING EQUIPMENT.
810550	6 EA	FURNISH AND INSTALL MICROLOOP PROBE SET WITH 500 FOOT LEAD-IN.
822002	380 LF	FURNISH AND INSTALL 12 PAIR, VOICE GRADE INTERCONNECT CABLE (NO. 19 A.W.G.) (JELLY FILLED)

## C. MATERIAL TO BE REMOVED AND RETURNED TO THE STATE HIGHWAY ADMINISTRATION

QUANTITY	DESCRIPTION
SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.	

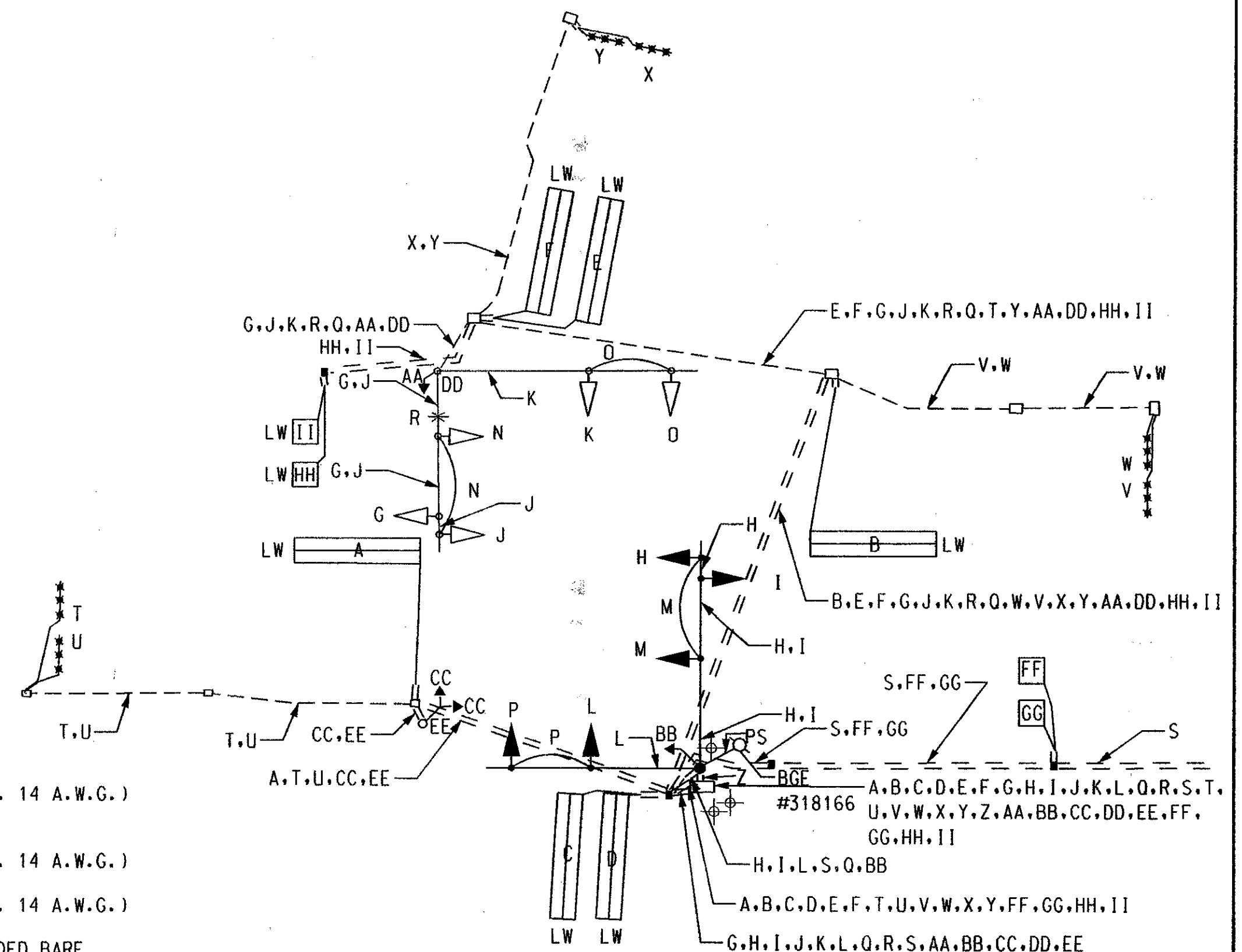
## WIRING KEY

A,B,C,D,E,F	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) (ALUMINUM SHIELDED)
FF,GG,HH,II	
G,H,I,J,K,L	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
M,N,O,P,CC	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
Q	1-CONDUCTOR (NO. 6 A.W.G.) STRANDED BARE COPPER GROUND WIRE
R	2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.) COPPER TYPE T/C
S	12 PAIR VOICE GRADE TELEMETRY CABLE (NO. 19 A.W.G.) (JELLY FILLED)
T,U,V,W,X,Y	MICROLOOP PROBE LEAD-IN CABLE
Z	3 WIRE ELECTRICAL CABLE (NO. 4 A.W.G.)
AA,BB	3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
DD,EE	2 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
LW	LOOP WIRE
PS	POWER SERVICE (OVERHEAD)
+	GROUND ROD

## PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11,12	13,14
PHASE 1 & 5	R	R	R	R	R	R	R	R	R	R	DW	DW
1 & 5 CHANGE	G	G	G	G	G	G	G	G	G	G	DW	DW
PHASE 1 & 6	R	R	R	R	R	R	R	R	R	R	DW	DW
1 & 6 CHANGE	G	G	G	G	G	G	G	G	G	G	DW	DW
PHASE 2 & 5	R	R	R	R	R	R	R	R	R	R	DW	DW
2 & 5 CHANGE	G	G	G	G	G	G	G	G	G	G	DW	DW
PHASE 2 & 6	R	R	R	R	R	R	R	R	R	R	DW	DW
PED. CLEAR	G	G	G	G	G	G	G	G	G	G	FL/DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	R	R	R	R	DW	DW
4 & 8 CHANGE	G	G	G	G	G	G	G	G	G	G	DW	DW
4 & 8 ALT.	R	R	R	R	R	R	R	R	R	R	DW	WK
PED. CLEAR	R	R	R	R	R	R	R	R	R	R	FL/DW	DW
4 & 8 ALT. CH.	R	R	R	R	R	R	R	R	R	R	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK

## WIRING DIAGRAM



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION  
Office of Traffic & Safety  
TRAFFIC ENGINEERING DESIGN DIVISION  
GENERAL INFORMATION SHEET  
MD 174 (QUARTERFIELD ROAD) AT PARKE WEST DRIVE / INDUSTRIAL DRIVE  
GLEN BURNIE, MARYLAND

DRAWN BY: K.G.A.  
CHECKED BY: B. THOMPSON  
SCALE: N.T.S.  
DATE:

F.A.P. NO.  
S.H.A. NO.  
COUNTY: ANNE ARUNDEL  
LOG MILE: 02017402.19

TS NO.  
1908 @  
T.I.M.S. NO.  
0727

SHEET NO.  
155 OF 195